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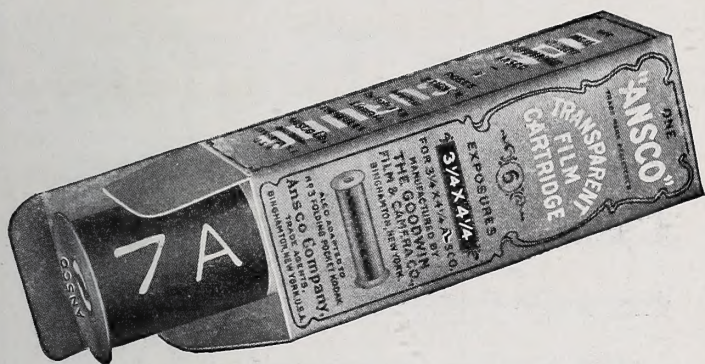
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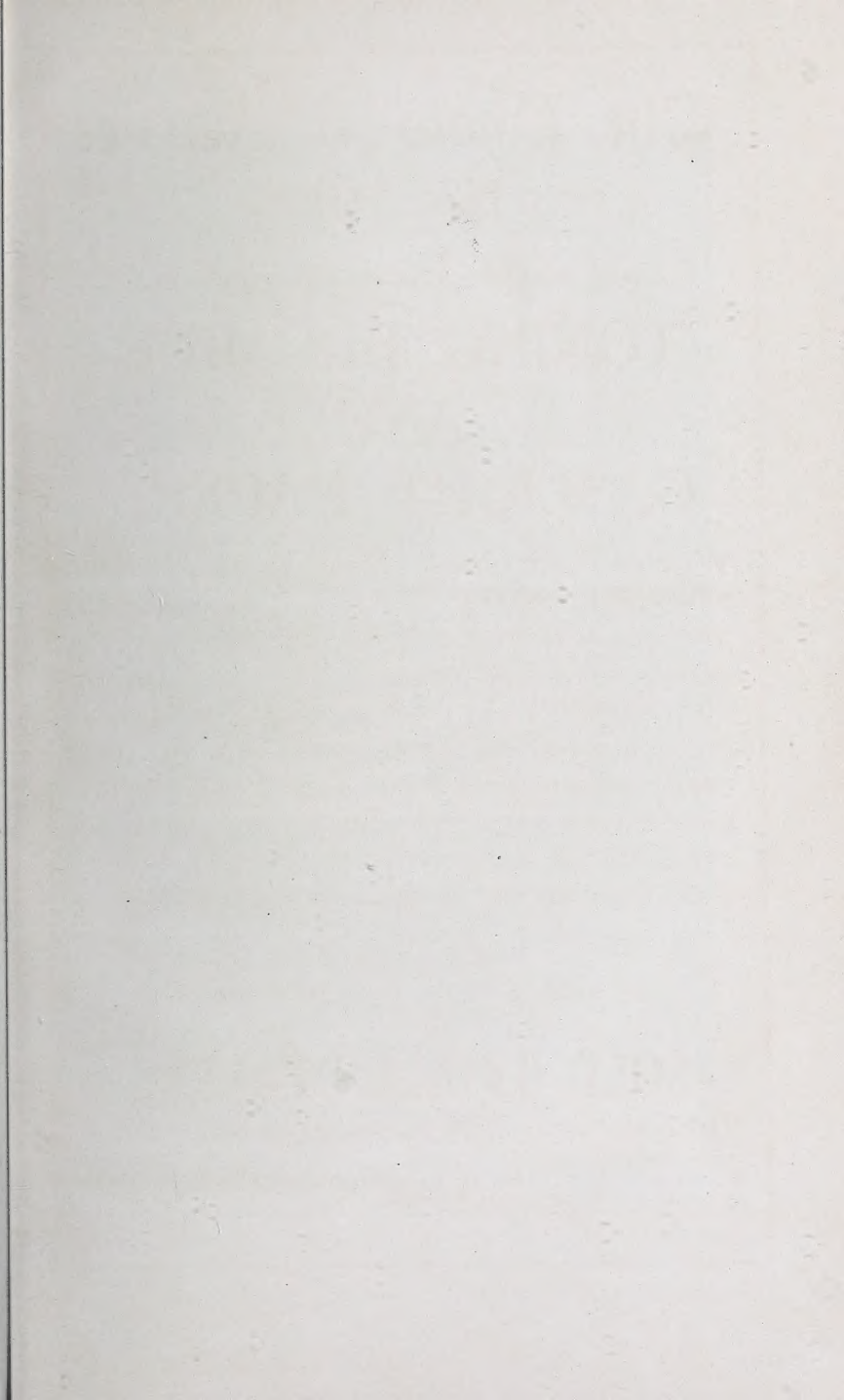
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A Medieval Doorway, Rothenburg
George E. Brown

Illustrating the normal mounting of a print. Side spaces equal in width; top space slightly less than that at the sides, and space below print exceeds that at top and sides.

The Photo-Miniature

A Magazine of Photographic Information

EDITED BY JOHN A. TENNANT

Volume IX

NOVEMBER, 1909

Number 102

Trimming, Mounting and Framing

There is no need in these days to say anything as to the necessity or the importance of the three operations which supply the title of this monograph. It was not quite the same when THE PHOTO-MINIATURE NO. 20, bearing this title, appeared. In the nine years which have passed since that time, enough has been said and written on these last scenes in the making of a photograph to fill a whole volume of the "P.-M.," and the rules which should guide the photographer have been drummed into him by a score of writers not always in complete accordance with one another. At the present time, therefore, it is more essential to deal with the practical ways and means, and with the principles which should guide their employment, than to belabor the question of their necessity. I suppose the widespread popularity of enlarging has led the amateur workers to cultivate the habit of looking for the best part of a negative, and then further subjecting the enlargement to criticism before finally mounting it. At any rate, the error of thinking that the print must include the full subject of the negative is one into which none but the veriest tyro is likely to fall, so that it is a work of supererogation to utter lengthy caution as to the inadvisability of adhering in our prints to the stock sizes of our plates and cameras. True, one should endeavor to get the negative as close as possible to what is desired in the final print; but if

the secrets of all hearts could be read, one would probably find that the faith of most of those who achieve success in pictorial photography would be expressed in the words of a well-known worker to the present writer, viz., that "it is a poor negative that hasn't got a good inch somewhere in it." Let not the gentle reader suppose, however, that this monograph is written solely for the benefit of those whose aim is pictorial. The unnumbered thousands whose work is less ambitious, though no less meritorious, will, it is hoped, learn how to carry out the work of trimming, mounting and framing their prints with speed, neatness and certainty; and these are points in the making of a print, in which, so far as the present writer's observation goes, assistance is often sorely needed.

Pictures Nevertheless, as the very mention of
Within Prints trimming implies that there is something to be cut away, it should be said at the start that the first piece of stock-in-trade of the worker would be a couple of good-sized L-shaped pieces of card, which can be moved together over the print, in order to discover by a process of exclusion which is the essential part of the subject. Fig. 1 shows the form of these cards, which may be roughly cut from any piece of millboard and kept handy for use. One British firm has issued a pair of cards of this shape attached to each other in such a way that, however one card is moved in relation to the other, a strictly rectangular shape of opening is retained. Usually, however, our selection of the whole subject of the negative is provisional at this stage, and such a truly rectangular opening of our pair of cards is really of little use. The main thing is that we do employ a method such as this to make the best selection of the material in the complete print, and that we apply it, when trimming the print or when masking a negative prior to enlargement.

Geometry of It is necessary to make sure that the
Trimming method adopted for trimming a print, or for marking it preparatory to trimming, is actually capable of ensuring true right-angles at the corners. The professional worker who trims his prints all to a few stock sizes gets over this part of the process



FIG. 1. Illustrating the use of L-shaped pieces of card

without much trouble, because he uses a series of glass templates or cutting shapes, which he lays upon the prints, runs a knife around, and the trick is satisfactorily done—that is, if the cutting shape is truly rectangular, which it often is not, when purchased. In German studios, it is a common plan to lay the wet print, as it comes from the wash-water, on the cutting shape, and trim off the projecting portions with a sharp pair of scissors. But, for our purposes, these methods are the last we should adopt, since they restrict us to a few standard sizes, and lead one to make do with what is nearest the size and shape of the cutting glass. We require a method by which we can mark off or trim off at any point, and be certain that the print will be truly rectangular. Exact “squareness,” it should be added, is a matter of the most vital importance when multiple mounting, as described in the latter portion of this monograph, is to be done. But first, a word on the basis from which we must start in trimming the print.

**Correcting
Faults in Prints** It may often happen that, owing to the tripod not having been level at the time of the exposure, the horizon in the negative is not truly horizontal; or, what follows from the same cause, the vertical lines are not truly vertical. This defect is easily and absolutely remedied by first trimming one side of the print with a straight edge, which is laid on parallel with the line which should be (and in the print, will be) perfectly horizontal or vertical, as the case may be. But, if the departure of the lines in the negative be due to tilt of the lens axis, the remedy by trimming can be only a compromise, and usually not a very satisfactory one. The lines, in this case, which should be vertical, converge in the upper part of the print (upward tilt of the lens at the time of the exposure), and no trimming will make good. The best course, if a print of this kind must be mounted, is to distribute the defect as much as possible. Lay the straight edge at such an angle with one of the “drunken” lines that about half the error is masked; unless, of course, there is but one line of a building thus defective in the subject, when, in most cases, the other parts of the subject may be left to take their chances, and the

trimming employed to correct the only departure from truth which will be strongly in evidence.

Trimming Methods

Let us assume, then, that one side of the print has been marked or trimmed by means of a perfectly straight rule.

The problem is to mark or trim the other three sides so that all the angles are right-angles. The common method of doing this is by means of a triangular set-square, which is set against the edge of the print already trimmed, and cut number two made. In like manner, one side of the set-square is again set against one or the other of the edges, trimmed, cut number three made; and so, again, for the last edge. The trouble with this method is that the eye cannot readily see when the triangular set-square is placed square to the clean edge. It is really necessary to have a stop against which both may be pushed, and then it is not easy to make a clean cut right to the corner. In practice, by this method it is very easy to trim a print very considerably out of square, owing to slight error in placing the set-square. To be certain of really accurate trimming, it is necessary to have a glass trimming shape ruled with parallel lines about one-eighth of an inch apart, and with at least one corner (marked) a true right-angle. Though there are some ruled shapes on the market, in England, there is none apparently of the above sufficient fineness of ruling, and, moreover, the commercial glass shape is not infrequently a little out of square. I therefore recommend the worker to get a piece of ground-glass accurately cut to a given size, say 15x12 inches, and have two edges ground smooth to a perfectly true right-angle. The ground side of the glass is then ruled with hard pencil with lines one-eighth inch apart, using a T-square and set-square for the purpose. The ruled surface is then given a coating of celluloid varnish, and is ready for use. The lines in the middle parts of the glass allow of the glass being placed true with the lines in the subject. Then, the exact position of the trimming-shape having been selected, so far as concerns the two sides enclosing the true right-angle, the first two cuts are given to the print. The shape is then turned around, so that the marked corner comes diagonally opposite its former position.

Care is given that the ruled lines on the shape are parallel to the edges which have already been trimmed, and the second pair of cuts again made either side of the true right-angle. Used in this way, the trimming-shape will allow of prints being trimmed with perfect accuracy and fairly quickly.

**Drawing
Board, T- and
Set-Square**

By far the most certain and accurate method of trimming, and the best for prints of large size, is first to mark off with a pencil a little outside of the actual dimensions required, and then, with a straight edge as a guide for the trimming-knife, cut off a shade inside these lines. The print is laid on the drawing-board, the T-square (shoved square with the board) laid over it, and the print shifted until the edge of the T-square falls along the line of the subject which is to serve as the base from which the print is to be trimmed. The print is then pinned down, and the T-square and set-squares used to mark off the portions required. In thus trimming, by aid of a metal straight edge, the latter can be placed very accurately just inside the penciled lines, since nothing is easier for the eye to judge than the parallelism of two lines which are close together. A well-sharpened HHH pencil is used to mark off, and the slightest variation in the space between the straight edge and this thin line is at once seen. The method may not be as rapid as the use of the guillotine trimmer now to be described, but is second to no method in accuracy.

**Guillotine
Trimmers**

A great variety of trimming boards fitted with a guillotine knife are on the market. None of them give the same facility of squaring up the print with the lines of the subject which is afforded by the two previous methods; but for straightforward work they are all a good deal quicker than the use of a shape and a knife. In all, a cut is given to start with as seems best for the print, and then this clean edge is turned against a stop fixed at right-angle to the knife and a second cut given, and so on, until all four sides have been trimmed. With all but very thin prints, such as those on thin albumen paper, the boards give very good squareness of print. Perhaps the best pattern of all is that known as the "Merrett,"

in which the board is hinged, and the cutting-blade made to press against a metal-faced edge; the hand which holds the print against the stop is thus available also, for making the cut by pressure on the board. The cut given by this trimmer is very true and even, and the

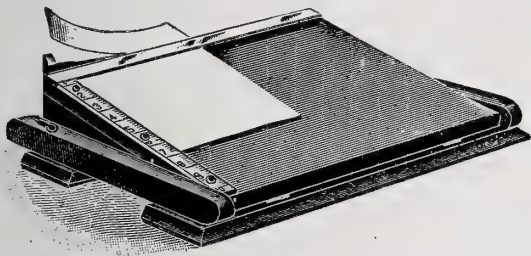


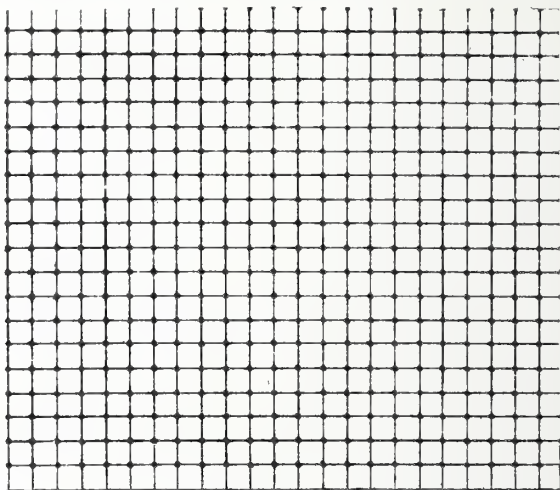
FIG. 2

apparatus is of great service for multiple-mount cutting, but it cannot be used to cut up thick boards, as can the heavier-made guillotine cutters of equal size. It is shown in Fig. 2. [This trimmer has just been placed on the American market by the Eastman Kodak Co.—EDITOR.]

Maitland Trimming Gauge Before leaving the question of devices for ensuring correct trimming, mention should be made of a very ingenious plan, the invention of Viscount Maitland. It consists of a piece of celluloid or engineers' tracing cloth ruled with two series of parallel lines into a series of small squares (about one-fourth inch). It is laid on the print to be trimmed and moved about until the portion desired in the trimmed print is arranged within a certain one of the innumerable rectangles formed by the crossing lines. A fine perforation is then made with a needle through each corner of the rectangle, the print removed, and a straight-edge trimmer used to cut it down from point to point of these four holes. This is most conveniently done with the print laid face down. A section of this Maitland Trimming Gauge is shown on following page.

Trimming Knives Many workers prefer to use one of the many wheel-trimmers sold at prices from thirty-five to seventy-five cents. The advantage of this type of cutter is that it remains in working

condition for a much longer time than a knife. It is made in two patterns, in one of which the wheel is mounted so that it can rotate, whilst in the other it cannot. The latter is all that is required for making straight cuts: the former is needed when trimming oval prints to oval or circular shape. The writer is perhaps prejudiced by long habit, but he certainly prefers a knife to the wheel-trimmer on account of a cleaner cut, even though a



Section of Maitland's Trimming Gauge

knife cannot be used as a wheel-cutter can for trimming wet prints. A very strong and cheap knife, sold as a cobbler's or bootmaker's knife at a cost of from 6d. to 1s (12 to 25 cents), of the form shown in Fig. 3 is a most useful trimming tool. Only the end part is sharpened, and the broad strong blade of the knife gives a very firm cut. Another form of knife which is much used is the double-bladed knife shown in Fig. 4, the short, stubby form giving great strength. The form shown in Fig. 3, however, will meet all practical requirements. It can be obtained at any hardware store.

**Trimming
Block**

The board on which the print is laid to be trimmed requires to be hard, otherwise it is soon cut up by the knife; and it also requires to be soft, otherwise the knife is blunted before being very long in use. About the best compromise between these irreconcilable requirements



FIG. 3

is a piece of flat zinc, which is usually screwed to a stout board. It is preferable to glass in that the surface grips the print more firmly. Another good material for a trimming-block is brown millboard, sometimes called bookbinders' board; but it has to be frequently renewed, every stroke of the knife working its destruction.

We are now in a position to pass to the mounting of our trimmed print. Trimming methods have here been dealt with at what may appear undue length; but the subject is one which most writers of text-books dis-

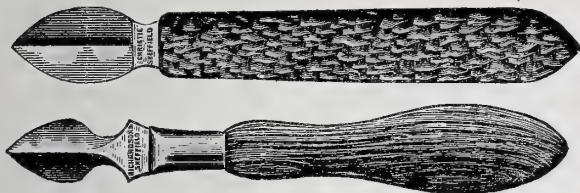


FIG. 4

miss in a few words, under the comfortable assumption that the operation presents no difficulties to the beginner, whereas, unless the present writer is mistaken, it is the one part of the photographic process which the beginner most prefers to shun, as witness the universal popularity of the slip-in mount and similar evasions. We will now pass to the most practical methods of mounting small prints in numbers, large prints a few at a time and, finally, the use of several mounting papers

built up at the back of the print, the so-called multiple method of mounting.

I shall not give more than two formulae for preparing mountants: The commercial ready-made mountants now on the market, of which the forerunner and still a standard article is Higgins' Photo-Mounter, possess points of superiority over the usual home-made mixtures. These modern mountants are more powerful adhesives, they penetrate the mount to a less extent (*ergo* less cockling), and they possess the further great advantage that they allow of a little sliding of the print after it has been placed in position. Moreover, they are of a high degree of chemical, or, what is more, photographic purity. Still, there is one mountant, i.e., starch, which for many purposes is such an excellent substance that the amateur worker—the professional, no less—should know how to prepare and use it. Many apparently fail in preparing a proper starch mountant, but, if the essential precautions are taken, the work of getting ready with absolute certainty a perfectly pure and permanent adhesive occupies only a few moments,—and that is a point which must not be overlooked, namely, that starch paste will not keep more than a day or so. It soon loses its sticking powers and, worse still, becomes acid. An invariable rule should be to throw away at the end of the day any not used. In making the paste, use the chemically pure starch powder, not the made-up granular form sold for laundry purposes and containing other substances, such as borax, in addition to starch. Place some of the powder (about one ounce to make twelve fluid ounces of paste) in a cup, and add water *a few drops at a time*, so as to form first a semi-moist mass and then a very stiff paste. The stiffness should be such that the stirring of the mixture with a fork makes really hard wrist work. Now pour in absolutely boiling water, stirring the while with the fork. The quantity of water should be about twelve times that of the starch, but, as it is impossible to measure the water, a mark should be made on the cup and the water poured in from the kettle or other vessel up to the mark. Stir briskly, and in ninety-nine cases out of one hundred the starch will



The Silvery Thames
George E. Brown

Illustrating the treatment of the print where it is desired to give emphasis to the foreground. The depth of space below the print is prolonged in border and mount.



The Burgomaster's Daughters
George E. Brown

Illustrating the correct placing of a tall, narrow print on mount. Note that the space at top exceeds that at each side of print.

jellify, that is become semi-transparent, in which state it must be in order to develop its full adhesiveness. Should it not jellify simply on pouring in the water, the mixture must be turned into a clean enameled iron saucepan and brought to the boil, when the jellifying process will at once take place. But if the mixture of starch and water be in the form of an highly stiff paste, and if the added water be absolutely at the boil, there will be no need for separate cooking. The jellified mixture is set to cool quickly by placing the cup in a dish of cold water. When cold, a skin will be found on the surface. This is taken off, and the paste is ready for use.

Mounting Prints

Now let us suppose, what is the commonest requirement of amateur workers, viz., that a batch of prints (trimmed) is awaiting attachment to their mounts in a plain unornamented way, without the trimmings of elaborate multiple mounting, the method of which, as we shall directly explain, is quite distinct. It matters not whether the prints are gelatine, collodion or albumen; the method I will now give will allow of their being mounted firmly and quickly. Starch paste may be used, or the ready-made dextrine mountant, such as Higgins', made a little weaker with water. The brush should be a good stiff hog's-hair, say a little over an inch in width or diameter and not over-long in the hairs, say one inch. The prints are placed in a big dish of water, to become limp. Five or ten minutes is ample for this; with some gelatine papers, a longer time causes the gelatine surface to become unduly soft. The prints are then laid all face down on a clean sheet of glass, placing them one on the other in piles, each of which is made up of prints of or about one size. Stand the glass on edge for five minutes, and let as much water as will drain off. Then, with a roller squeegee, or blotting-paper, press out the moisture from each pile, and commence brushing mountant over the back surfaces, exposed one print at a time. Never mind about applying the paste to the uppermost prints only. Simply paste over everything there is to be pasted, and brush well into the prints so that the mountant penetrates the pores of the paper. The mounts being at hand, lift off a print from the top of its pile, touching it

as little as possible with the fingers. The best means of raising one corner is a silver fruit-knife, the blunt blade of which cannot damage the print. Lay lightly in position on the mount and, again, lightly go over the print with a clean, soft, gritless piece of sponge, dipped in clean water and well wrung out. No need to use pressure, simply sponge the print into contact and put the mount aside. The print will adhere just as firmly as though you used a lot of pressure. Some workers make a point of mopping the back of the print with blotting-paper before pasting up, but there is no real need for it. Nor is there occasion to use anything but the sponge in securing prints to the mount. Naturally, the thinner the paper, the more easily it is attached to the mount; but the best method of adjusting the procedure in this respect is by the use of a stiffer Higgins' or other strong mountant. For most papers of normal weight, starch paste works excellently on the above plan. Obviously, the mount must be of decent quality, not one which will not bear being wetted for a second or two. Obviously, too, the mount, unless of very heavy weight and close substance, will bend or cockle to a greater or less extent, but not to an inconvenient degree in the case of prints of moderate size. For large prints, where absolute flatness of the mount is desired, there is nothing to touch the dry-mounting process. The use of a spiritous gelatine mountant is a bad second, but we will describe it first.

**Non-cockling
Gelatine
Mountant**

Cheap sheet gelatine, or a gelatine such as Nelson's No 1, is put to soften or swell in water, in the proportion of 4 ounces of gelatine to 16 ounces of water. The mixture is liquefied by standing the containing vessel in boiling water, and methylated or Columbian spirit (5 ounces) is then added, a little at a time, stirring rapidly. Finally glycerine (1 ounce) is added. The best way of applying this mountant to the print to be mounted is to dip a large piece of ground-glass in hot water, allow the water to drain off, and then brush the hot mountant over the glass. The print is laid, face *up*, on the pasted surface, and rubbed gently and quickly into contact by laying a piece of

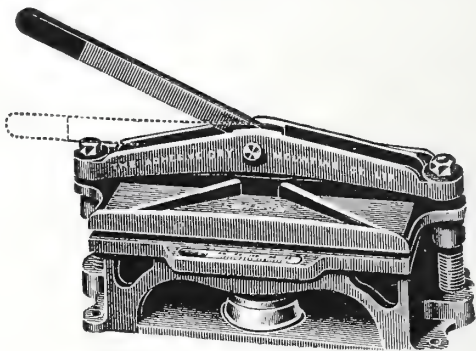
paper over it, then removed and laid in position on the mount, and rubbed down. The gelatine mixture will keep a considerable time, being prepared for use by standing its bottle in hot water.

Placing the Print In case of a print which is a good deal smaller than its mount, it is no easy matter in the ordinary way to place the print centrally or symmetrically on the mount. Various methods of marking the mount have been recommended, but the most practical and speedy plan is to use a mask the full size of the mount and just a little larger than the print. This mask is laid on the mount so that the opening in it comes where the print is to be. It is kept in place by laying one or two weights on it, and it is then a very easy operation to apply the print centrally in the aperture of the mask, any want of centering being immediately seen from the non-parallelism of the edges of the print and of the aperture in the mask. When a number of mounts of standard sizes are used, a few masks will serve all purposes; but, in any event, the making of the mask is very quickly done with a drawing-board and T-square.

Mounting Large Prints Though exact centering has to be considered less often in the case of large prints, which are usually mounted on any sized piece of board and trimmed down for close framing, yet, when a large print has to be placed correctly, regard must be paid to the fairly large degree of expansion which paper undergoes when wetted. This expansion takes place chiefly in one direction only, that is, in the width of the original sheet, or, in the case of paper made in roll, in the width of the roll. But the amount of expansion may be more than would be thought by those who have never measured it. A 10 x 12 print, on being wetted, will very likely expand to 10 x 12 ½. Therefore in trimming a print which is to be mounted wet within a certain space,—say the plate-mark of a commercial mount,—allowance must be made for this expansion, or the centering of the print may be altogether out. The print requires to be trimmed down a little smaller one way, to allow for the subsequent expansion. But this difficulty, as well as those of cock-

ling and fading of the print from the mountant or the mount, are completely avoided by the dry-mounting method invented and patented by Derepas brothers, in France, in 1901, and of late largely adopted by photographers, both professional and amateur.

What is Dry-Mounting? Briefly described, the dry-mounting process consists in the attachment of the print to the mount by a layer of shellac, which is caused to cement print and mount together by the action of heat. Shellac had previously been used as a mountant in the form of a strong solution in spirit, applied to both print and mount, and the two pressed into contact while the cement was still sticky. While this method may be used for quite small prints, it is



Dry-mounting Press

useless for those of any size, owing to the speed with which the shellac sets. Also, methods which may be called "semi-dry mounting" have been in use, notably that of Mr. Alexander Cowan, in which prints and mounts were coated with starch paste, both allowed to dry, both lightly gone over with a just moist sponge and immediately pressed into contact. These methods have not the positive usefulness and certainty of the latter-day dry-mounting system. According to the Derepas patent, which is that under which the process is marketed in the United States by the Eastman Kodak Co., the

shellac is supplied in the form of a tissue, which is cut to the size of the print and attached to the latter by the touch of a hot iron. The print with tissue at back is then laid down in position on its mount and given hot pressure in a press made for the purpose. Others have proposed to apply the shellac as a solution to the backs of the prints, and, when the solvent has evaporated, to treat in the hot press as above described; but, so far as the present writer can learn, that method is not largely used, and it is possible that it is an infringement of the Derepas patents. It will thus be seen that dry-mounting possesses three distinct advantages: 1. It avoids all distortion of the print due to expansion and contraction. 2. It avoids all cockling and bending of the mount, even of the thinnest. 3. It provides an insulating layer between the mount and the print, and thus shields the latter from any chemical effect of impurities in the mount. Of these three points, that which has had the most evident effect is No. 2, the whole manufacture of mounts, particularly those used by professional photographers, having been changed from thick heavy boards to the thin and beautiful mounting papers now so universally used in folders and portfolio mounts.

Dry-Mounting in Practice The outfit for dry-mounting includes a supply of the shellac tissue in pieces a little larger than the prints which are to be mounted, a fixing-iron mounted in a wooden handle, and, last, a hot press. For professional work where large-sized prints have to be mounted, the cost of such a press runs into a fair sum (about \$30 to \$50=£6 to £10), but, for amateur use, a press which can be used for prints up to 5 x 7 inches on mounts up to 8½ inches wide is commercially available. Lastly, some form of guillotine trimmer is needed for trimming print and tissue at one cut. The most convenient for the purpose is the "Merrett" trimming desk already described. Although this outfit mounts only the area of 5x7 at one dwell of the press, yet it must not be forgotten that it serves equally well for mounting larger prints at two or more dwells, and the final result shows no sign of having been achieved in several stages. Thus, for the above modest sum the amateur worker can deal with prints of

any size so long as one dimension does not exceed 7 inches, and with mounts of any size so long as one dimension does not exceed $8\frac{1}{2}$ inches. The press may be heated by either a small spirit lamp, or, preferably, by a small gas burner, which keeps in action indefinitely and is more easily regulated. First, each print (untrimmed) is provided with a piece of tissue, by laying the latter in contact with the back of the print and giving a touch with the hot fixing-iron. This secures the tissue at one point, and it is well to attach tissues to the whole of a batch of prints before proceeding with the next operation, which is trimming print and tissue together in the ordinary way with a guillotine. We thus obtain the tissue exactly in register with the print, so that on the mount, after hot pressure, there will be no edge left unattached and no tissue protruding from the opposite edge of the print. All prints having thus been trimmed, the next step is to attach each at one point only to the mount. This is done by laying the print exactly where it is to go on the mount, and then, holding one corner down in place with the hand, by raising an opposite corner with the thumb and finger and giving a touch of the fixing-iron to the adhesive sheet. The latter is thus attached at one point both to mount and print, and all that now remains is to subject it to the hot pressure. The gas is lighted under the press, and the latter brought to the right heat. I say right, because the temperature does vary for different purposes, being higher the thicker the print. But there is a wide latitude for error, and, within wide limits, want of temperature may be made up for by a longer dwell of the press. If the press is too cold to melt the shellac properly, of course nothing happens. The extreme of temperature may be put down as 140° Fahr. to 190° Fahr., say 170° to 180° as a useful average, the print being given a dwell of five seconds. There is no difficulty at all in regulating the press to this heat. In preparing it for use, place the two mounting plates in it to warm up with it, and when the press has attained a steady heat, remove the two covers to the table, lay the one to be used (matt or polished, according to the nature of the print) face up, lay on it the print and mount face down (=mount

uppermost), on this lay the other mounting cover and the pressure piece of cardboard, and slip the whole back into the press. A five seconds' dwell of the lever will then secure the print firmly to the mount.

I am afraid that all this looks terribly formidable in print, but in actual work dry-mounting rattles merrily along, and, quite apart from the perfect flatness, permanence and rapidity of the method, one wonders how one could have remained so long content with the tedious and messy pasting methods. Boiled down into the fewest words, the process consists in: (1) Applying tissue by a touch of fixing-iron to the back of each print. (2) Trimming print and tissue together. (3) Adjusting print on mount and fixing there by touch of fixing-iron through tissue to mount. (4) Laying between mounting plates. (5) Giving a dwell of five seconds in the press.

If a print has to be removed from its mount, all that is necessary is to heat a mounting plate to 250° or 300° F., press the back of the mount upon it, and with a piece of rag press one corner of the print until it is seen to become loose. This corner is raised and the pressure applied to another, which is similarly detached from the mount, after which the whole print will readily leave the mount.

Multiple Mounting

This method of embellishing the photographic print originated in America. I well remember the first occasion on which its use was shown in England, namely by Mr. Holland Day at the Royal Photographic Society, in October 1900. The house exhibition of photographs by American pictorial workers then held was composed almost wholly of prints mounted in this way, though without much elaboration. In most cases, only two mounting papers were used, that immediately bordering the print and the back paper or mount proper. Since then, multiple mounting has been universally adopted as a means of enhancing or enriching a print, or of giving it its most effective setting.

In this application of the method, no one has approached Mr. Frederick H. Evans, well known to all visitors to exhibitions of the Linked Ring by his photo-

graphs of architectural subjects. Mr. Evans has brought multiple mounting to a degree of refinement which renders it more akin to the French method of surrounding a drawing by ruling ink lines and filling up the spaces between some of them with faint washes of color. In fact, Mr. Evans has shown by his work and his writings on the subject that the multiple-mount method, if skilfully employed, is capable of a far greater range of effects than any combination of lines and painted borders. I must acknowledge my indebtedness to Mr. Evans' paper on the subject before the Royal Photographic Society in February of last year, as well as to its writer personally.

In treating the subject, one must not forget that mounting, like the making of a photograph into which we endeavor to introduce pictorial quality, is largely, nay chiefly, a matter of taste. Too often it becomes one of fashion; but, in any case, it is foolish to suppose that one can lay down hard and fast rules and insist that they should be followed. There are certain principles by which one is guided in the use of a number of mounting papers, but it does not follow that a successful mounting scheme should be the embodiment of all of them. Therefore, in setting forth the factors which are concerned in the pleasing use of the method, I hope the reader will bear in mind that they are offered first of all as a means of preventing him from making glaring errors, but not with the object of discouraging him from exercising his taste and skill in other directions than those suggested. But let him not forget that a mount which impresses the beholder with its wondrous or clever character has failed in its mission. The best testimony it can receive is that it is felt to fit the print, but does not draw attention upon itself.

The directions which opportunity offers for the making or marring of a print by the method of backing it up with tinted papers may be said to be seven in number: (1) Size of mount, relative to the print. (2) Position of print on the mount. (3) Color of the mount—in harmony with, or contrast to, the print. (4) Depth of color of the mount—light or dark. (5) Arrangement

**Governing
Factors**

of borders. (6) Choice of textures of mounting papers—rough or smooth. (7) The relation of the mount to the frame. I have placed these factors in the order in which they fall, to be considered when preparing a mount by the multiple method. I will first consider each, before passing to the methods in the practice of which they are applied.

Large or Small Mount Under, this head, all that needs to be said is that the smaller the print the greater the *proportion* of mount which it will stand. A 3x4 print, placed with a suitable disposition of borders on an 8x10 mount, will not look lost, whereas an 8x10 print placed on a mount of the same proportional size, namely on an 18x30 board, will look over-mounted. A 6x8 print (upright) will look very well placed on an 11x15 mount, whereas, if it had the proportion just named for a 3x4 print, the area of mount would be almost exactly double this.

Placing the Print The one place NOT to put it is in the geometrical center. Professional mounters still insist on thus placing a print, probably because it is the easiest thing to do. But the print which is placed at the center of a board *looks* dropped quite a good deal below the center. There are plenty of examples of this mistake on exhibition walls, but I give a pair of illustrations, Figs. 6 and 7, which will show the correctness of the rule that the space below the print should always be greater than that above it.

As regards the space which should be left at the sides of the prints, the classic rules are that, in the case of an upright ("portrait") print, the spaces on either side and above the print should all be equal; whilst in the case of a horizontal ("landscape") print, the spaces on each side should be equal to that below the print, the upper margin being somewhat less.

There is no doubt that the most pleasing and "correct-looking" effect is obtained by departing somewhat from these dicta of the authorities. For an upright picture, the top margin should always be a little less than those at the sides. These latter should be equal to each other and, usually, considerably less than the



FIG. 6

Print placed centrally on mount. Note the dropped appearance.

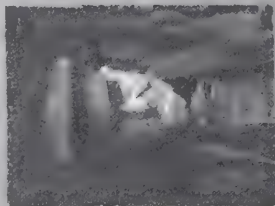


FIG. 7

Print placed correctly on mount. A little above the center

bottom margins. In the great majority of subjects, it will be found that this rule is observed. An exception is a very long, narrow print. If the narrower top margin be adhered to, it has the look of having been chopped off by mistake. A print of this shape requires a top margin greater than those on either side, and it then looks as though the usual course had been followed.

In the case of a landscape print, the departure from the classical rule goes the other way. The side margins may be made broader, and the margin below the print made a little less, than those at the side. Here, again, there are exceptions. If we wish to accentuate the foreground in a print, it will be found well to have a broader margin of mount below. If, on the other hand, it is desired to give emphasis to the horizontal lines in a subject such as a seascape, or a subject where horizontal lines have been chosen for their suggestion of restfulness, the side margins are made broader with advantage. The effect is to increase the apparent width of the picture.

In every instance, the worker is advised to have the side margins equal, that is, not to place the print to one side or the other of the mount. Lines in the subject are sometimes thought to justify decentering of the print horizontally on the mount, but it almost always happens that the result savors of affectation.

Light or Dark Mounts The principle on which the final or back mount should be chosen is that it should enhance, or bring out, the characteristic features of the print: but do not forget that its work in this direction can be overdone. A light mount will enrich a dark print, whereas a dark mount will show up a print in light tones, and emphasize the delicate gradations in the half-tones. Inversely, a very dark subject calls for a still darker mount to relieve it, and a print in which the tones are thought to be too light will be helped by placing upon a still lighter mount. And as it often happens that different parts of the print contain quite different areas of tone, the beginner may be excused for feeling puzzled as to which scheme of mounting is likely to serve best. The multiple system, however, is very flexible in this respect, in which connection I can-

not do better than pick out one bit of advice from Mr Evans' paper before referred to: "Supposing that our subject is a portrait against rich dark background, I would first suggest trying a light bottom mount; though at first this may seem quite wrong, for a dark subject or background seems naturally to call for a dark mount to relieve it. But you will find that very often a dark mount will rob your background of its depth and richness and that a suitably light mount will enrich it and give it new value. And here comes in the advantage of using three or more layers. There is a certain shock to the eye in a dark background coming direct onto a light mount, —it looks too cut out, or cut off; but, if this is bridged over by suitably toned intermediate papers, the shock is not felt. A case may occur where a light background must be kept as light as possible, and then a dark mount is best." In short, if one would put this part of the subject into the fewest words: To enrich dark tones, use a light mount; to heighten light tones, use a dark mount. To relieve dark tones, use a darker mount still; to relieve lightness of tones, use a still lighter mount. This is a crude statement of the subtle art of the use of mounting papers, but it may serve the reader in his first essays.

Color of Mount

The same principle of heightening an effect by contrast or diminishing it by sameness holds good as regards the color of mounting paper to be selected. The easiest type of print to mount is one of pure black color, which spares us the problem of color to a great extent, and allows us to produce extra apparent coldness or warmth of color by choice of the mounting paper; those of bluish tint help the warmth of color in the print by contrast, while those of brown similarly serve to make the print appear colder in color. As a rule, black prints look best on neutral mounts, gray on white; in these questions of color fixed rules are more misleading than in any other section of our subject. Prints of brown color usually look their best when mounted in lighter or darker tints of brown; or of cream, if a very light scheme is being adopted. Similarly, blues go best on bluish mounts, whilst red chalk looks better on white than on anything

else. To reiterate our general rule, harmony relieves the effect of the print, whilst a mount of contrasting color accentuates it. For example, a sepia print gains greatly in richness when put on a dark green mount; but let us warn the reader that it is more difficult to go wrong when using harmony schemes than it is to go right when working by contrast.

Arrangement of Borders The easiest mistake to fall into is to repeat the borders of equal width.

There must be some design, or the mounting becomes meaningless repetition. The second error into which one readily falls is the use of borders of quite strong-colored paper. I must quote Mr. Evans again on this point: "No color should be selected or used which will have a final effect of color *as* color. If we do, we will inevitably spoil or vulgarize our print, and only achieve a garish, inartistic effect. Photography is a monochrome art, and we must beware how we endeavor to enrich it by means of color in our mounts. The tints of our paper must be such that they are felt only as low-toned washes or dividing lines." In other words, a mounting paper which cannot be tolerated for mounting purposes, when used as a border of any width, may be used with advantage when it projects from the paper above it to the width of only one-sixteenth or one-eighth of an inch.

Texture of Mounting Papers I have mentioned this as a factor, but it is one of quite minor importance, for the reason that if we endeavor to humor our print in the way of suggesting greater

roughness or smoothness by aid of the mounting paper, we greatly handicap ourselves in the choice of suitable tints of the papers, which is by far the chief consideration. It sometimes happens that a mounting paper of extra-coarse texture may be of service in conveying the suggestion of greater smoothness in the print; but, with the tremendous variety in the surfaces of photographic sensitive papers at the present time, there should be little call for the mounting paper to render such assistance as this. For securing tone effects, of course, the use of rough surfaced papers is often an invaluable aid, but this requires careful handling.

Frame and Mount On this last point but one comment is needed. It is: Assign the duty of surrounding the print effectively either to the mount or to the frame, not to both. If the mount includes several borders, the molding should be of the plainest sort, a simple flat beading or the plain binding strip of a passe-partout mount. In case of a frame which is at all ornate, the best plan is to dispense with a mount around the print,—in other words, frame “close up.”

Mounting Papers In laying in a stock of papers, it is well to err in the direction of choosing the more neutral colors, light and dark. Papers of strong color will rarely be required, and give the beginner opportunity for mistakes. For choice, the reader can range over the cover papers of all manufacturers. Many of these are carried by photographic supply houses, or can be seen at the nearest printery.

Trying a Scheme As regards the practical methods of forming the mount, we are indebted to Mr. Evans for very workmanlike methods described below, in some cases in the worker's own words. To save time when selecting tints, it is a good plan to go through one's stock and cut a small piece, say 5 x 7 inches, from each paper. To quote Mr. Evans: “I then true up each corner and sort them into lights and darks, etc. This forms a sort of palette of tints, and can be readily chosen from as we proceed. I choose what I think will be the best as a first layer and put the top left-hand corner of the print in position on it, showing the exact margin to be used. Holding them together in the left hand, I pick up the next chosen tint and place it behind the first two. Holding them out at arm's length, I try the effect of various widths; when satisfied, I place the next tint behind them and again test the whole. If satisfied, I place them on the final sheet (as near as possible in the proper position on it), with the left hand grasping the whole. Holding all up at arm's length and in an even light, the entire effect, as regards the top of the print at any rate, can be judged.”

The First Paper The print requires to be trimmed perfectly square and true at the outset, as any error will be magnified as each successive mounting paper is applied. The print is placed

on the first mounting paper and attached by a tiny dab of stiff paste, such as Higgins,' at one corner, the top right hand. This one touch of paste is made to serve for each successive mount until all are in place, for the reason that it lessens the chance of cockling. When the mount has been completed, a second touch of paste is given under each left-hand corner, and that is all the pasting done. In the case of some mounting papers which persist in cockling, it is well to put the paste behind the body of the print, not at the one corner only, though this plan does not make so neat a finish, the corners sticking up a little.

**Trimming to
Form Border
No. 1**

The best means is the guillotine trimmer. A knife used on zinc or glass leaves an edge or burr to the paper, very often quite spoiling the effect of the mount when seen in oblique lighting. The burr may be taken off by rubbing down with an ivory paper knife or the thumb nail, but this with some papers leaves a shiny surface which ruins the appearance of the mount. "Unless we are gifted with an accurate eye, it is best to mark the width to be cut away. I use a hard retouching pencil, and with it make a small dent on each side, top and bottom, where I want to cut. Placing this on the guillotine cutting-board, I make these dents come accurately at the cutting edge by denting the paper with the thumb just behind the pencil so that it will just be cut off. This will ensure perfect straightness, and, by placing a steel straight edge over the paper close to the cutting edge, the paper will not buckle as the blade comes down along it, however thin the paper may be."

Border No. 1 having been applied to the back of the print in this way, the same series of operations is performed to border No. 2, and so on until the mount is completed. The back mount comes last of all, its size and position being decided by the considerations we have already gone into.

**Dry Multiple
Mounting**

As practised according to the foregoing method, the multiple mounting system necessitates a print which lies perfectly flat on the mount when attached by the two upper corners only, and is therefore not suitable for

carbon, bromide, or other prints having a gelatine coating. Platinotype and plain papers are the only varieties of printing papers for which it is really suited. Using the dry mounting method, however, any print may be multiple-mounted; although in this case one is restricted to a lesser number of mounting papers, owing to the fact that each involves not only a paper but the thickness of the cementing tissue. Still, the dry mounting method is capable of most effective use, the manipulation as to trimming each mount to form the border being exactly as already described.

**Multiple
Mounts to
Lie Flat**

A final practical point, which we owe to Mr. F. H. Evans. It concerns the trouble with the multiple-mounted prints that, owing to their greater thickness in the middle, a pile will not lie flat. "One way out of the difficulty is to keep the mount as simple as possible, using the fewest number of papers one can, and then to use the last layer but one untrimmed. If we then treat the very last sheet as a cut-out mount, cutting the opening in it so as to show exactly the desired proportion of the last but one, which we left untrimmed for this purpose, and then lay the whole down on cardboard, the cut-out, especially if we can get its tint in a quite thick paper or thin board, will largely allow for the thickness of the papers inside it, and a pile of such mounts will be found to lie quite-flat. I find it best, when using this method, to paste the untrimmed sheet on the cardboard foundation, lay the cut-out sheet onto it, and then adjust the print and its mounting papers in position in the opening, all having been scrupulously measured and squared-up first. The truing-up is more essential at every step in this method than in any other, as the cut-out sheet, when finally put into position, reveals errors in a most cruel fashion."

Framing

If it is difficult to lay down hard and fast rules in mounting, it is doubly so in the case of the selection or design of the frame. Fortunately there is not the need just now to lay stress on matters connected with the frame, the tendency being now to allot the chief duty of the embellishment of the print to the mount. And, here the

caution must be repeated—do not allow the frame to supplement the work of the mount. A severely simple and plain molding is all that is necessary to complete a print which has been properly and pleasingly mounted by the multiple method. Elaboration in the way of framing is fitting chiefly when the print comes close up to the inside rebate of the molding. When this is the case, it is probable that the majority of the ambitious effects in frames fall short of their aim; the notice of the observer is drawn away from the picture, not to it. One recollects Sir Humphrey Davy's famous comment on his visit to the Royal Academy, "What an extraordinary collection of fine frames!" Therefore, while the space now at my disposal is best devoted to the useful *passepartout* form of frame, one practical point may be mentioned here in regard to the ordinary pattern of frame.

**Air-Tight
Framing**

The slipshod manner in which most frame-makers finish off their work is responsible for many of the short lives of photographic prints. It is usual to back the mounted print with one or two pieces of thin match-board, so that air and fumes from gas obtain access to the print from the back as well as in front, round the glass, which frequently fits none too well. To secure enlargements or any kind of photograph as much as possible from injurious fumes, the glass of the frame should first be secured in the rabbet with strips of good-quality paper stuck on with paste. Then the print is placed in, and on it the backboard (in one piece), which is secured with brads. A piece of stout brown paper is then damped, allowed to expand, and fastened with glue to the back of the frame only, not to the backboard. When dry, the paper will be as tight as a drum, and, should at any time the backboard shrink, no fumes will get in.

**Passe-partout
Framing**

The *passe-partout* frame consists of a piece of glass and one of pasteboard, between which the photograph attached to a (thin) mount is laid, and glass and backing bound together with a gummed strip. The backing card carries the supports by which the *passe-partout* is suspended, usually a pair of brass rings about one-half

inch in diameter. The simplicity of this form of frame admirably adapts it for the protection of the multiple-mounted photograph. It is quite unsuited for photographs affixed to heavy or stiff mounts, as the binding is not strong enough to hold the latter flat in contact with the glass.

The first thing to do is to cut a piece of glass, a shade larger, say one-fourth inch each way, than the mount, which is to be made the meat of our pictorial sandwich. A piece of good pasteboard is then cut the exact size of the glass. The latter having been made perfectly clean, the mounted print is laid face down on it. The rings are fixed to the backing card by making two slits in the latter, and pushing, through each, one of the special forms of ring and fastener sold for the purpose. The fastener resembles an ordinary paper fastener, and, though it is very quickly and easily fitted, it has the drawback that it pulls out rather easily when cording the finished *passe-partout*, and, in the case of prints affixed to very thin mounts, the points of the fastener will sometimes perforate the latter unless a linen or stiff paper shield be glued over them. Therefore the more tedious plan of fastening the ring to the backboard by passing a loop of broad tape through the slit and gluing it to the inside of the board is preferred by many. Some workers also content themselves by running a single loop of tape or cord round through the two slits dispensing with the rings altogether, but this plan compels one to hang the *passe-partout* on one nail only, with the result that it is constantly getting crooked on the wall. The rings allow of two separate cords being attached each to a separate nail, so that when once it has been set straight the frame always remains so.

In any case, the rings having been affixed, the back and glass are bound together with the print between them. For this purpose the strips of Denison are very useful, as they are sold coated with a very strong adhesive of fish-glue. There are some twenty-two colors in the Denison *passe-partout* series, but most of them are much too bright in color for the framing of photographs. The No. 1 (black), No. 2 (white), No. 3 (gray), and No. 5 (brown), form a useful set to commence with,

whilst the gold strip suits almost any photograph or mount, but particularly vignetted prints or those having a great deal of very light tone in them. When starting, perhaps it will be found best to cut the binder into lengths suitable for the sides of the glasses, but with a little practice it becomes easiest to use the binder from the reel and turn over at each corner, as in binding lantern slides. When rubbing down the binder, apply pressure first on the edge and then on the front, on which side of course the binder must be laid perfectly even in width, allowing any unevenness to find its way to the back.

The Cloth-Covered Frame Another form of frame, very appropriate for many photographs, and by no means widely known, is one formed preferably of binders' board, covered with book cloth. This was described for the first time in *THE PHOTO-MINIATURE* NO. 20, and its simplicity and usefulness abundantly justify its inclusion here. I quote Mr. J. Horace McFarland: 'There is no reason, of course, why a wooden frame should not be covered with cloth, but the advantage and beauty of the form, possibly original with myself, in which the basis is some form of binders' board, make it unnecessary to trench upon the excellences of the wooden frame. The cloth-covered frame is therefore flat, and it is somewhat of a hybrid between the conventional mat and a frame, because it continues the tone over a flat surface. Its extreme simplicity commends it, in that there is no interest taken from the picture when thus framed. Further, the flexibility as to color of this form of frame gives it an especial value. Book cloth may be had in almost endless colors and tones, and in a great variety of textures, so that one's feeling of appropriateness can be more nearly accommodated in this medium than in any other.'

As I write I see on the walls various cloth-covered frames, illustrating their color adaptability. A fine trichromatic reproduction of a De Longpré peony study, in which the flowers are in deep reds, delicate pink and white, with yellow centers, the prevailing tone being crimson, is framed by three inches of dark maroon cloth, in pleasant harmony. A delicate picture of rare fungi by

W. Hamilton Gibson, done in light orange for the main color, is successfully complemented by a dull Turkish-blue frame. A favorite blue-print, toned to a deep and rather dull blue, with two interesting figures as the whole picture, is framed close up in dark blue, the frame being beveled toward the center, and a single gold line relieving the broad blue surface, about a half-inch away from the picture; the whole effect being harmonious.

A brown etching-effect portrait of my old friend William Kurtz, the veteran artist and photographer, is held in a deeper brown frame, and a delicate line portrait of Paderewski, most charmingly worked in black and white by Gribayèdoff, is mounted in a gray frame.

I multiply these instances only to show the great adaptability of the cloth frame. One can hardly fall afoul of a color not readily matched or contrasted by an easily available book cloth. A splendid and rare portrait of Abraham Lincoln, done in coloritype some years ago, with a dark orange background, was a rank failure on the wall until I found its fitting enclosure in a yellowish brown cloth.

The shades of gray give perfect effects with platinum and bromide prints, and the varied tones of carbon and gum may be most agreeably harmonized or contrasted with a fitting cloth. Further, if the worker has any sketching ability, he can do *remarque* etchings on the frame surface to any extent. The cloth is quite durable, and may even be washed off, in the more subdued hues, without harm to it, save a dulling of its surface—and this is sometimes a benefit, rather than a damage.

Making the Frame The method of making these cloth-covered frames is simple, but the work is best done by a book-binder, accustomed to the handling of the board and the book cloth. I will briefly describe the process.

In order to have the directions definite, I will presume we are making a frame to take a glass $6\frac{1}{2} \times 8\frac{1}{2}$, which will agreeably take a picture printed on 5×7 paper, mounted on any suitable backing. (The 5×7 print may also well be worked in a frame with a larger opening; I am only taking the size mentioned as a convenient example.) We will have a frame $2\frac{1}{4}$ inches wide, speak-



Carnations

J. Horace McFarland

Illustrating the simplicity of the cloth frame

ing from the standpoint of picture-molding, and the net opening for the picture will be 6x8 inches, which allows $\frac{1}{4}$ inch on all sides for the "rabbet," in which the mounted picture and its protecting glass rest.

First, we cut a piece of pulp-board (a smooth board used for paper-boxes and for tablet-backs) of fair thickness (that known as No. 40, in sheets 26x38, is proper, though any smooth board will answer) to the size of $10\frac{1}{2}$ x $12\frac{1}{2}$, having it exactly square. On this, purely for convenience in beginning the work, we mark out with a square and pencil a rectangle 6x8 inches, representing the final opening of the frame. (See Fig. 8.) We will call this the face piece.

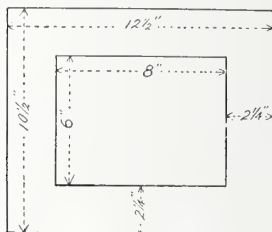


FIG. 8

Now cut two sets of strips from a heavier board, and of a better quality than the pulp-board. That known as No. 20, in size 26x38 of a good quality of "straw-board," will answer, though a stronger and somewhat heavier frame can be made from No. 18 "binders'-board," 23x29. In passing, it may be noted that a number of frames may well be made at once, and that the aspiring amateur who attempts to cut tar-board, or even straw-board, with a knife and straight-edge will have a warm and unique experience! Better by far get them cut on the "table-shears" of the nearest binder, who may also be expected to furnish the board; and I may be pardoned the hint that the same binder's scrap pile may well furnish the strips for the frames. The only care, if they are thus obtained, rather than by cutting from the full sheet, must be to have them of uniform thickness or "number." (The designating number of binders' boards means simply the number of sheets in a commercial "bundle," which always weighs 50 pounds; and obviously the larger sizes of a given number are thinner, a point which will explain some discrepancies if remembered. Straw-

board is much lighter in weight, relatively to its thickness, and consequently much thicker in a given number, than tar-board or binders' board.)

The first set of strips for our frame are represented in Fig. 9; two are $2\frac{1}{4} \times 12\frac{1}{2}$ and the other pair are $2\frac{1}{4} \times 6$. These are for the first layer. The second set, made so as to allow for the "rabbet" and to break joints or corners, are $2 \times 10\frac{1}{2}$ and $2 \times 8\frac{1}{2}$, two of each. This set must be thick enough to equal the thickness of the glass and the mounts, if not, a third set may be cut, of the dimensions of the first set, and it will add strength as well as give a deeper rabbet. The whole matter of thickness and quality is relative; we need to get at least an eighth of an inch of depth in the rabbet, and any even board will answer. Wooden strips would do, but they are more trouble to work, far more liable to cockle and twist, and not so durable or inexpensive.

There may also be prepared a back

Back Piece piece of pulp-board or light straw-board, the same as the face piece, but one-half inch smaller each way, which would make it 10×12 over all. This is to enclose the picture.

Assembling the Parts Now to the making, premising that for this work a slow-setting *flexible* glue is desirable—carpenters' glue is too harsh, and sets too quickly. Take the first pair of strips (A, on Fig. 9), brush them thoroughly with the warm glue, and

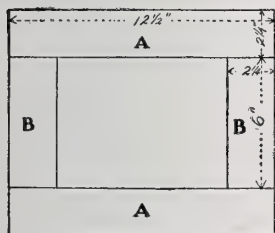


FIG. 9

lay them in position on the face piece, keeping flush to the top and bottom. Then glue and put on the smaller strips, keeping them even both inside and at the outer edges. It is important that the center opening is square and the previously drawn lines on the face piece will help in placing the strips accurately. Allow the em-

bryo frame to "set" for about fifteen minutes, having it on a smooth flat table under an even weight.

Then proceed to glue and apply the second set of

strips, which are designed to "cross corners" with the first set. This set, being narrower, and placed flush on the outer edges of the frame, provides the rabbet, and the appearance of the frame at this stage is something like Fig. 10. Lay it aside under pressure another quarter of an hour to "set," after which cut out the opening through the face piece with a sharp knife—such a knife as shown in Fig. 3 will be suitable. The edges of the first set of strips serve as a guide for this cutting, which must be done smoothly, with clean corners—a "wobble" at this point will show very disagreeably in the finished frame. As the pulp-board is easy to cut, there ought to be no trouble in getting a smooth, even edge.

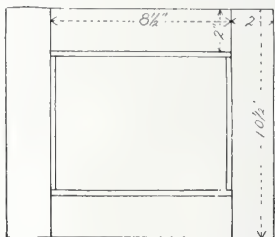


FIG. 10

Rounded Edges

It will be sometimes an advantage if the face of the opening is carefully and slightly rounded, which can be readily done with any scraping edge or with a shoemaker's rasp. When the opening is finished, put the uncovered frame away under even pressure to dry—it ought to stand overnight. (My practice is to make up a number of the uncovered frames in various sizes at once, and keep them until ready to use, then applying any color or texture of cloth demanded by the picture to be mounted. Special shapes and sizes, of course, will need to be specially made.)

Covering the Frame

Next comes the covering. Binders' cloth comes in rolls, and varies from 36 to 38 inches in width, the whole roll containing 30 to 40 yards. The textures found most useful are known as "Art Vellum," "Vellum de Luxe," "Buckram," etc. Any binder will have a sample book showing shades and patterns. Of course *any* cloth could be used for covering the frame, or any paper, for that matter; or it could be painted, gilded or enameled. The worker can turn his fancy loose—the cardboard

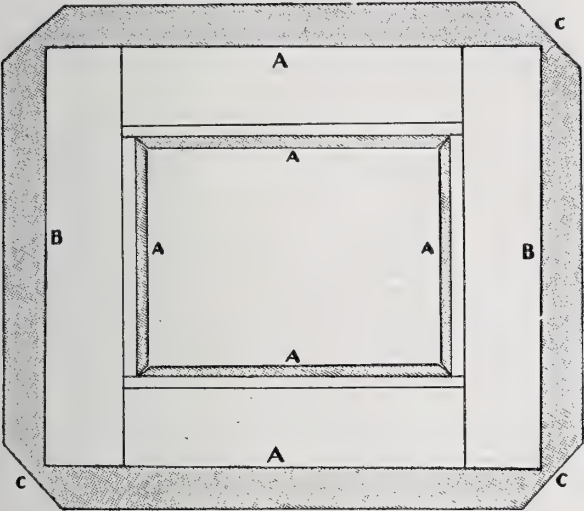


FIG. 11

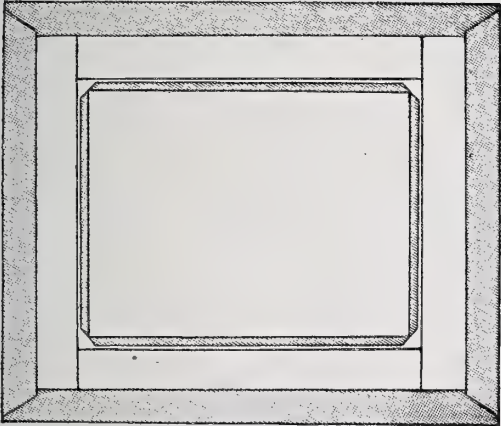


FIG. 12

frame is good material for his decorative ideas! But presuming on the practice of using binders' cloth, I say that we take a piece of it, cut a full inch and a half larger than the frame each way— $13\frac{1}{2} \times 15\frac{1}{2}$ would be the size for our experimental frame. Lay the cloth face down on a clean board, and brush into its back the hot flexible glue, working clear to the edges, but leaving a clean space of no certain area in the center, merely to save dirty fingers. The glued cloth should lie untouched for about two minutes, to give it a chance to become evenly moistened with the glue, thus avoiding wrinkles later. Lay the frame face down upon the glued cloth, and very carefully draw the edges over the edges of the frame.

Now, cut out the center, using a knife, and allowing something less than an inch on each side for "turn-in." The cloth when glued is quite flexible, and it must be worked carefully around the central opening, smoothing it down into the rabbet. The diagram in Fig. 11 will show how the corners of the cloth should be cut, after the frame is laid upon it, to facilitate folding. Inside, a simple diagonal nick will help the turning-in. In working on the face, use the hand only; to smooth the cloth into the rabbet, a bone "folder" or any similar round-edged tool may be employed.

There is a procedure which practice has shown to be the best for this covering work. Referring to Fig. 11, it is as follows: *First*, cut the corners with scissors, as marked at C. *Second*, turn in the edges marked A. *Third*, turn in the edges marked B, and nick the corners into shape with scissors and thumb-nail, working the cloth inside the rabbet with the "folder."

Framing the Picture

When this covering is done, the frame will look like Fig. 12 *on the back*. It is then ready for the glass and picture. The former should be carefully cleaned, particularly on the side to go next the picture, and both it and the picture laid in the rabbet, to which they may need to be fitted. A piece of paper should be laid over the back of the picture.

Now take the back piece formerly alluded to, and cut openings—mere slits—in it about two inches from the

top, and from each side, through which slip a strong linen strip or cord. Paste down on this, *inside*, a reinforcing piece of strong paper or cloth. Then coat the back piece carefully with glue around its edges, and lay it on the frame with its picture, covering the turned-in cloth, and leaving a neatly even margin all around. Press this down, place it under a moderate weight until dry, and your picture is framed.

De-Mounting Prints I suppose this monograph would not be complete within its restricted sphere if it did not make mention of the method to be followed in removing a print from the mount. The use of extra-hot pressure has already been described in the case of the dry-mounting process. As regards prints affixed to the mount with other adhesives, such as starch, dextrine, gelatine, etc., there is only one formula, and that a very simple one. It is: Remove the mount from the print, not the print from the mount. In other words, the plan to follow is to pare off the mount with a sharp knife, starting from the back, and then, when it has thus been cut away as close as possible, soak in tepid water and remove the remainder by gentle friction with the finger.

GEORGE E. BROWN.

Notes and Comment


Dr. Otto Schott, the founder of the well-known optical glass works at Jena, whence come the wonderful glasses which have made the modern anastigmat possible, has been visiting the United States, and was the guest of the Bausch & Lomb Optical Co., of Rochester. Dr. Schott and his wife reached New York late in September, and went directly to the Seattle Exposition, visiting the principal cities and scenes of interest throughout the West.

When the late Professor Abbe was working out the practical application of his optical theories, he was confronted with the difficulty of obtaining suitable glasses. This was as far back as 1876. In response to his call for volunteers who would provide material in the shape of new optical glasses, Dr. Schott entered the field and, after years of systematic experiment, succeeded in producing what was needed. The new glasses made at the Schott Works were tested by Professor Abbe, and it became possible with them to establish a definite relationship between given chemical compositions and optical results. So great was the interest aroused in this work that the German government lent its financial aid, and today the glass works at Jena are famous throughout the world.




Ibso is the name given to a new between-the-lens shutter, constructed on the sector system, giving speeds or exposures from $\frac{1}{150}$ of a second to one second, with bulb and time exposures as usual, and a safety lock which prevents accidental exposure. The Ibso has few parts, and its lightness and simplicity of operation together with its excellent finish and workmanship make it a very desirable shutter for the hand camerist. Despite its special features and capacity for high speed


work, the Ibso is retailed at a very moderate price. The Ibso shutter can be obtained through any dealer, Burke & James, Chicago, being the American agents.




Announcement is made that the Jury of the Sixth International Photographic Salon will be composed as follows: William Henry Fox, Director of the Herron Art Institute of Indianapolis; A. H. Griffith, Director of the Museum of Art of Detroit; John C. Johnson, a pupil of Whistler; E. H. Osthaus, a well-known painter of landscapes and animals; and George W. Stevens, Director of the Toledo Museum of Art. Communications concerning the Sixth Salon may be addressed to Mr. George W. Stevens, at the (Toledo) Museum of Art.



Quite a number of inquiries have reached us asking where transparent oil colors, suitable for lantern-slide coloring, can be obtained. For the information of those interested in this branch of work, we would advise that Winsor & Newton, Ltd., 298 Broadway, New York, offer two sets of oil colors, media and brushes for coloring lantern slides, in which the lantern-slide colorist will find all his needs supplied. Particulars of these sets may be found among the advertisements in this number.



Readers who can spare clean, perfect copies of THE PHOTO-MINIATURE Nos. 2, 3, 5, 8, 10, 11, 15, 16, 22, 24, 26, 29, 36, 51, 54, 61, 67 and 75, will confer a favor by sending us a list of what they can supply. These numbers are desired to complete sets of the magazine, and we will gladly pay a premium over and above the published price per copy.



An attractive little story, titled "The Sun Worshipper," comes to us from the Defender Photo Supply Company, of Rochester. It fits the waistcoat pocket, is attractively illustrated, and well worth sending for.

We are advised by the C. P. Goerz American Optical Company, of New York, and Burke & James, of Chicago, that arrangements have been made by which Burke & James will hereafter be the sole distributing agents for Goerz lenses in Chicago and the middle western states. Burke & James, in accordance with this arrangement, will carry in stock a complete line of the products of the C. P. Goerz American Optical Co., for the prompt filling of all orders. As they will be in a position to give the same terms and conditions of sale as can be obtained from the C. P. Goerz Company direct, dealers in the Middle West can save time by forwarding their orders to Burke & James from this date forward.



The demand for "Anastigmatics," that clever little booklet about lenses published by the Bausch & Lomb Optical Co., Rochester, N. Y., has necessitated a second edition, which is now ready for distribution. Most dealers have supplies of this little book, but, if not readily obtainable, a post-card to the Bausch & Lomb Optical Co., Rochester, will bring a copy.



The list of awards at the International Photographic Exposition at Dresden has been published. It includes many awards made to American exhibitors in all the photographic departments of the Exposition, but the list is too lengthy for publication here.

We may note, however, that special awards of honor go to the Harvard College Observatory; Percival Lowell, Flagstaff, Arizona; Prof. G. Hale, Pasadena, California; and Prof. R. W. Wood, Baltimore, Maryland, for prominent achievements in astronomical and color photography.

Gold medals in professional photography go to F. A. Bradley, E. B. Core, Gertrude Kasebier, and Pirie MacDonald, New York; J. C. Strauss, St. Louis; Frank Scott Clark, Detroit; Eugene Hutchinson, Chicago; E. E. Doty, Belding, Michigan, and Elias Goldensky, Philadelphia. In the industrial section, no American firms exhibited except the German branch of

the Eastman Kodak Company, whose exhibit was not entered in the competition. Awards of honor in this department went to Lumière Brothers for advancement in color photography, to C. P. Goerz and Voigtlander & Sohn for progress in photographic optics, and to the firm of E. Schering.



The new catalogue just published by the C. P. Goerz American Optical Company, 79 East 130th Street, New York, is notable, even among the many excellent lists put out by this firm, by reason of its richness of information about lenses, and beautifully printed illustrations, showing the capacity of the Goerz lenses in different departments of photographic work. The notes and definitions of astigmatism, spherical aberration, chromatic aberration, coma, curvature of field, depth of focus, speed, covering power and angle of view, are clear and concise and give the catalogue permanent value. The examples of the use of lens formulæ, enabling the reader to find the relation between the size of the object, the size of the image, and the focal length of the lens, hyperfocal distances, and exposures in telephotography, are also very useful. Following these, we have practical information on the choice of a lens according to its use, fully detailed descriptions covering the different lenses manufactured by C. P. Goerz, the Xexcell Sector shutter, ordinary and stereoscopic, the Tenax shutter, the Ango (Goerz Anschütz) Folding Camera, the telephoto Ango, and the tropical Ango, the Goerz Stereoscope, the Vest Pocket Tenax Camera and Enlarger, the new Goerz Folding Reflex Camera, the Autofoc-Tenax, the Manufoc-Tenax, the Goerz Special Balloon Camera, with focal-plane shutter, which makes use of the Lynkeioscope of twenty-four inches focal length, together with the Goerz ray screens, focusing glasses, binoculars and sundries. As these items indicate, the range of the Goerz specialties has been considerably enlarged of late, and the reader who desires to be informed about the new helps and conveniences available should get a copy of this new Goerz catalogue and give it the careful reading it deserves. Copies can be had from the

address given above, upon request, accompanied by six cents for postage.



More than one reader of THE PHOTO-MINIATURE No. 97 has expressed to us his disappointment over the difficulty of finding in the American market some of the small hand cameras of European manufacture. We, therefore, note with pleasure that the Gaumont Company, 124 East 25th Street, New York, is now introducing in America the famous Block-Note cameras, which, for fineness and accuracy of construction with extreme lightness and lack of bulk and size, are unequaled by any other instruments of their class. Messrs. Gaumont have published a catalogue describing and illustrating the Block-Notes Nos. 1 and 2, together with the Stereo Block-Note No. 2, which can be had on application; those who can, however, should take the opportunity of a personal examination of the Block-Note, by which alone its many remarkable features and exquisite quality of workmanship can be properly appreciated. An illustration may be of interest. Block-Note No. 1, when closed, measures only $1 \times 2\frac{1}{2} \times 3\frac{1}{2}$ inches, thus fitting the vest pocket, or the ladies' hand-bag, with a weight of only ten ounces. This little camera takes plates $2\frac{5}{16} \times 1\frac{3}{4}$ inches, and the instrument is brought into position, shutter set and finder ready for use, by two simple movements. The lenses supplied with the Block-Notes are of the highest grade only—Zeiss, Goerz or Voigtlander. This fact, together with the rigidity of the apparatus and the smooth movement of the shutter, assures the highest quality of optical definition in the negatives, which, in turn, makes the obtaining of fine enlargements from these small negatives a simple and satisfactory operation. For the tourist, scientist or specialist, as well as for the amateur who wants the best possible results without bulkiness in apparatus, the Block-Note is an inspiration.

Books and Prints

All books noticed in these pages may be obtained from the publishers of *THE PHOTO-MINIATURE*, and will be promptly forwarded, postpaid, to any address on receipt of the publishers' prices as here quoted.

London. By Alvin Langdon Coburn. 20 plates; with an introduction by H. Belloc, M. P., New York, Brentano's. London. Duckworth & Co. Price \$6.

Under this alluring title Mr. Coburn has gathered a remarkable series of photographs, taken from negatives made during the last five years, giving us his impressions of the great metropolis. Mr. Coburn's views of London are interpretations rather than matter-of-fact records of the great city. To their making he has brought a lively imagination, together with a keenly sympathetic appreciation of beauty. His London is perhaps not the London with which the man on the street is familiar. Nevertheless, it is always London—as an artist sees it, or as a poet would make us see it.

We are all familiar with the beautiful prints in gum and platinotype by which Mr. Coburn has made his reputation. Latterly he has come to recognize in photogravure a method capable of producing prints comparable to his highest achievements in gum platinotype and, at the same time, a method which enables him to make such a publication as the present one possible. Every plate in the series under notice has been made by Mr. Coburn himself and the prints pulled by his own hands; so that the possessor of this portfolio has, at a very slight cost, twenty original prints by Coburn, which, as individual prints in gum platinotype, could not be purchased for fifty times the price of the portfolio.

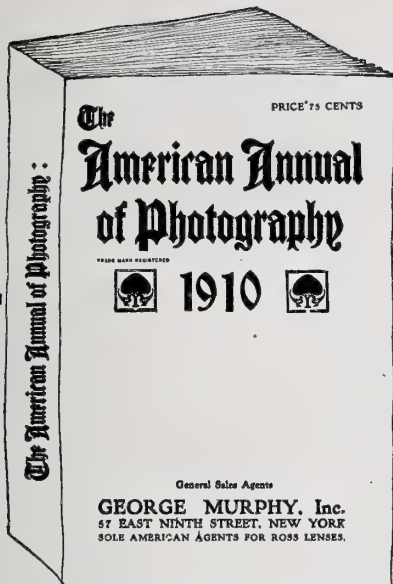
We note that Mr. Coburn is at present exhibiting at the autumn Salon of the Goupil Gallery, London, the

original photographs of the subjects in his "London" portfolio. It is to be hoped that we shall have this exhibition among the winter's offerings at the Photo-Secession galleries.



Photographic Optics and Color Photography, including the Camera, Kinematograph, Optical Lantern, and the Theory and Practice of Image Formation, by George Lindsay Johnson, M. A., M. D.; 404 pages, with 14 full-page plates, 5 in color and 170 illustrations in the text. Price \$3 net. New York, D. Van Nostrand Company.

The complaint is sometimes made that our photographic text-books lack seriousness and thoroughness, and do not sufficiently take account of the scientific side of the subjects they discuss. Those who seek a comprehensive text-book of photographic optics and color photography, in which the subject is treated with that precision and thoroughness it deserves, will find in the work here noticed a volume which will abundantly satisfy their aspiration. The need for a deliberate and well-digested summary of the theory and practice of photographic optics, and its close relationship with the many new problems in color photography, has long been apparent. Those who seek up-to-date information in this department will find Dr. Johnson's work a veritable storehouse of interest. The chapter dealing with the optical lantern is particularly welcome, as including descriptions and illustrations of recent apparatus. The appendix contains many useful tables and formulæ.



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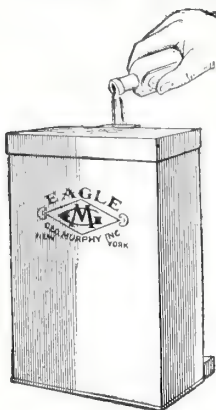
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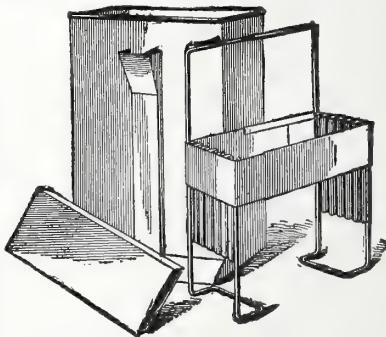
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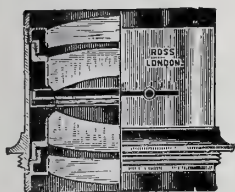
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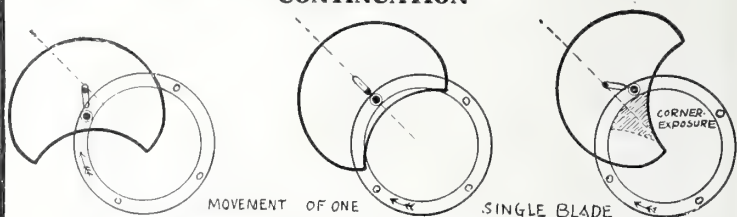
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You will be interested, too, in the new Goerz Cameras: the Vest Pocket Tenax, the Pocket Tenax and the folding Reflex. Then there is the new Tenax shutter and the Yellow Ray Filters—but get a copy and see for yourself. It may be had for 6 cents to cover cost of mailing. We would also appreciate it if you would mention this magazine and your dealer's name when writing us, or if you prefer

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Among the most recent of the numerous triumphs of Goerz lenses, is this:—Practically all the photographic work on the successful Peary North Pole Expedition, was done with the Goerz lens.

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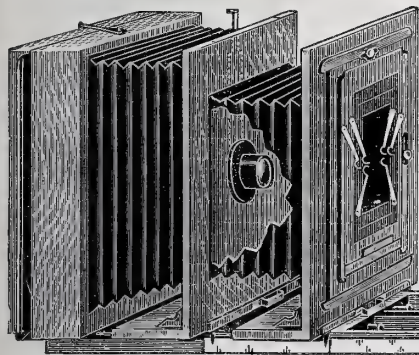
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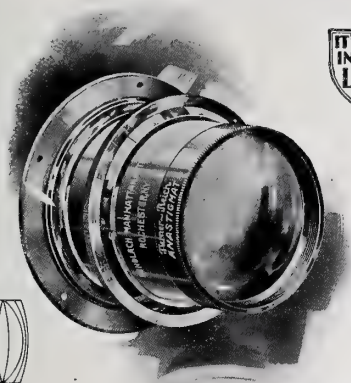
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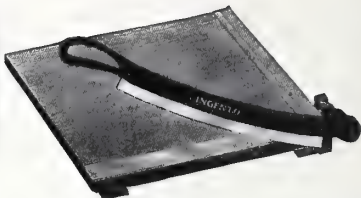
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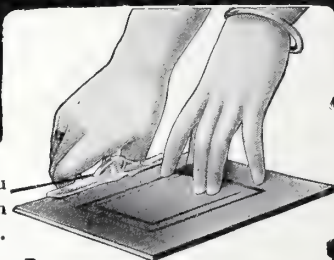
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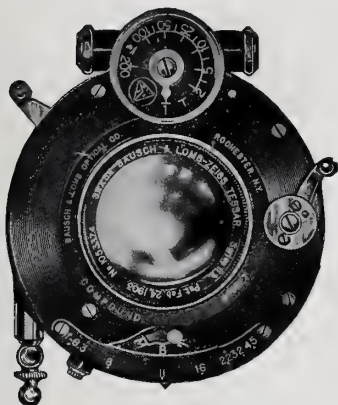


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THE AUTOTIME SCALE

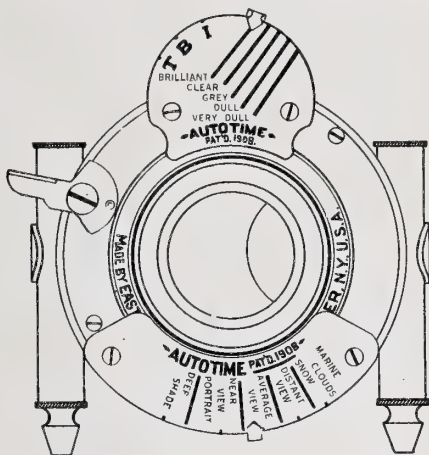
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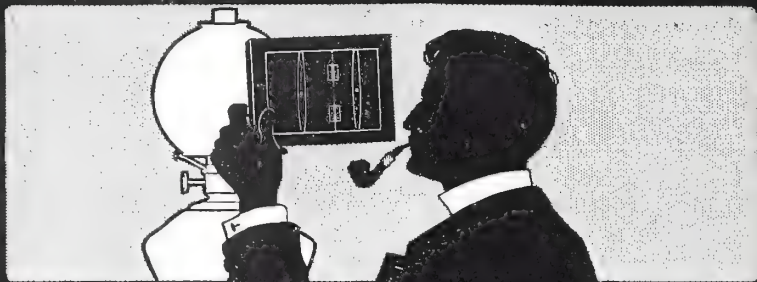
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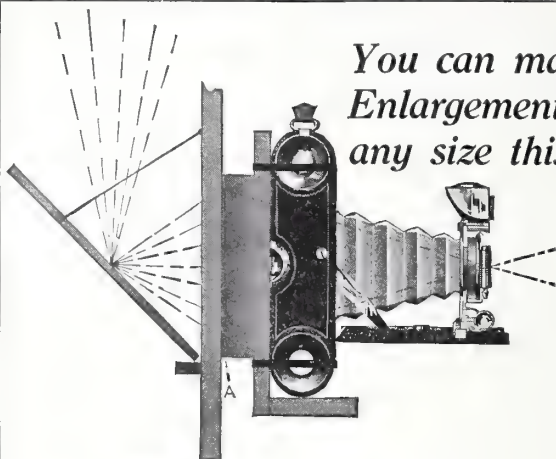
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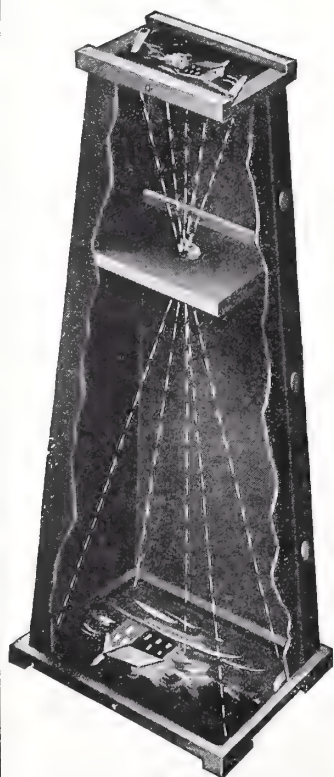
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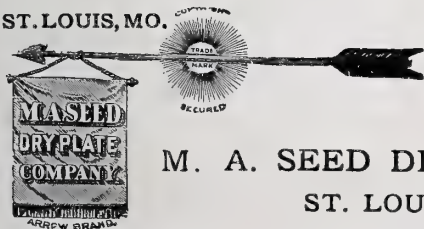
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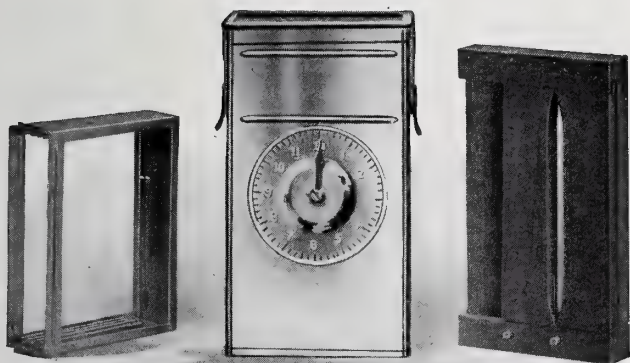
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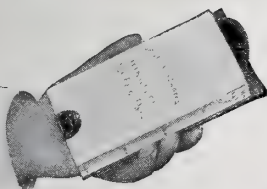
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